

# **NASA 2004 Safety and Health Managers' Meeting**

**MSFC Industrial Safety Report  
March 5, 2004**

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# Agenda

- MSFC Safety Successes
- Metrics
- Supervisor Safety Web Page (SSWP)  
Demo

# Process Enhancement: Determination of Explosion Safe Distance

- Army Vortex Thrust Chamber Explosion in Test Area
- Large Fragment Found Approx. 520' Downrange, Outside of Controlled Access Area
- Previous Q-D Calculations Based on Quantity of Propellants
  - Explosive Mixture at Test Article (Fragmentation) Not Taken into Account
- Hired Explosives Blast Analysis Expert - Developed Primary Fragmentation Methodology
- MSFC Personnel Trained, Utilizing New Methodology and VEXDAM Software



# Safety Bulletin: Ford Pickup Cracked Wheel

- After Reading Bulletin, MSFC Employee Checked Wheels on Dodge Dakota
- 3 Wheels Found w/Cracks
- Wheels Immediately Replaced, Reported Finding to Dealer
- Potential Injury/Death Averted





# Safety Meeting Discussion Averts Potential House Fire

- During Safety Meeting, Employee Asked if Extension Cord Supplying Space Heater at Home Should Feel Hot – Answer “No”
- That Evening, Employee Took Closer Look
- Melted Insulation Around Prongs on Male Plug & Carpet Fibers Stuck in Insulation
- Extension Cord's Rated Capacity Below Space Heater's Demand
- Potential Fire Averted



***Underrated Industrial  
Safety Success:***

Absence of Serious Injuries in Test Area and  
Industrial Area in Spite of Hazardous  
Operating Conditions, Commodities, and  
Equipment

## Other MSFC Safety Successes

- MSFC Safety Awareness at All-Time High
- Hired Part-Time Contractor Support for Random Surveillance During Off-Shift & Weekends
- Heightened Awareness of Proper Lockout/Tagout (LOTO) Process
- Re-Structure of SHE Committee Significantly Increased Employee Involvement
- Requested to Present MSFC Safety Metrics at VPPPA National Conf. Sept. 03
- SHE Pocket Guide, SHE Program Overview Video

## Other MSFC Safety Successes

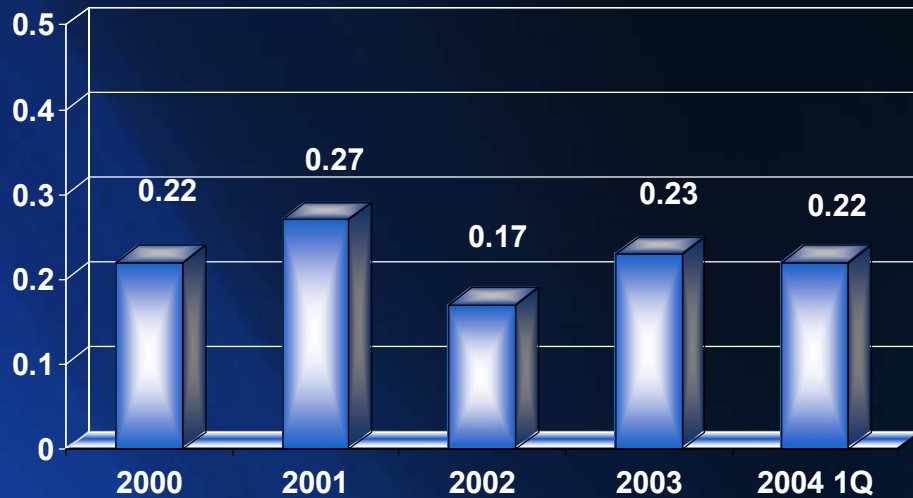
- Medical Case Worker Position Added in New Medical Center Contract
- Community Outreach Activities
  - Lowe's Hometown Heroes Event
  - Safety & Health Fair at Local College
  - Safety Fair at Local City



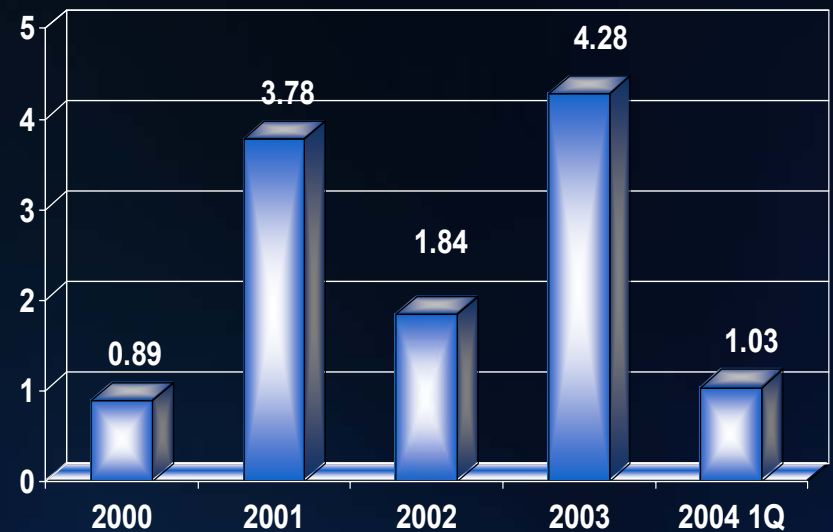
# MSFC Safety Metrics

# MSFC Civil Service/Contractor Team

## Lost Time Incident Rate

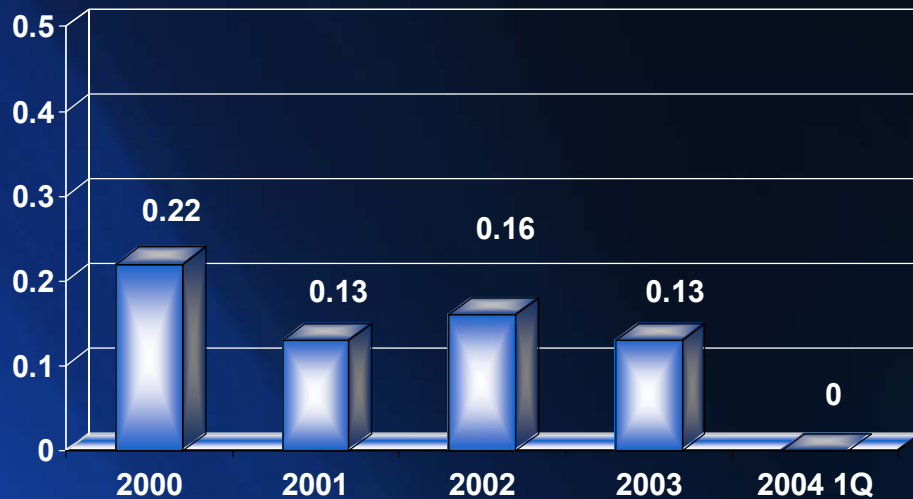


## Lost Time Severity Rate

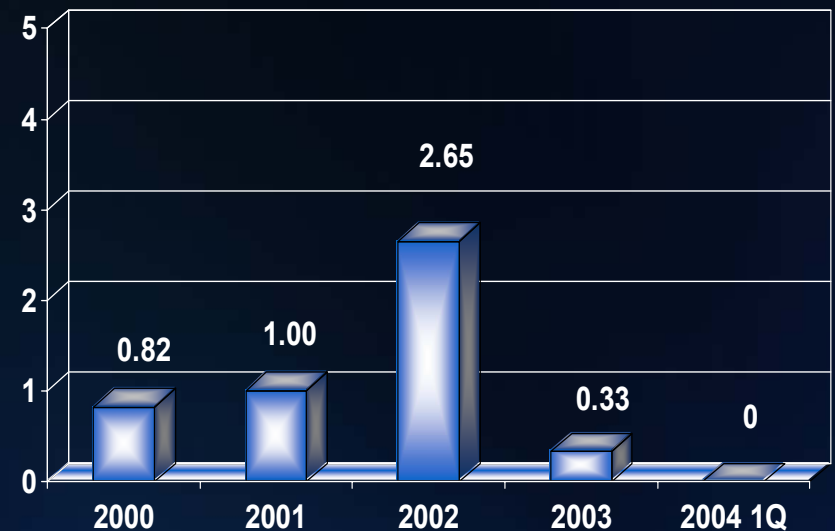


# MSFC Civil Service Lost Time Rates

## Lost Time Incident Rate



## Lost Time Severity Rate

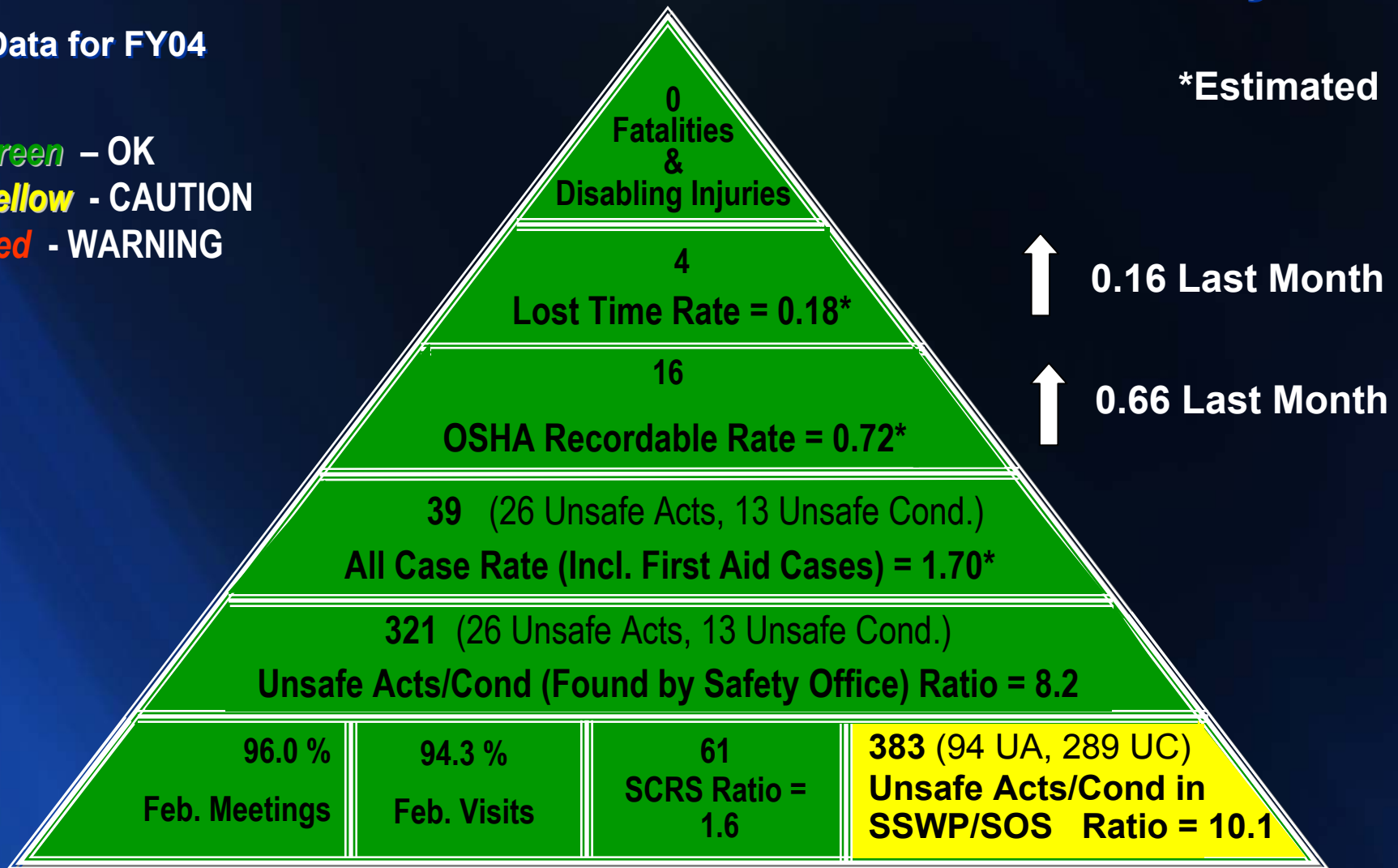


# MSFC Team Metric - Personnel Safety

Data for FY04

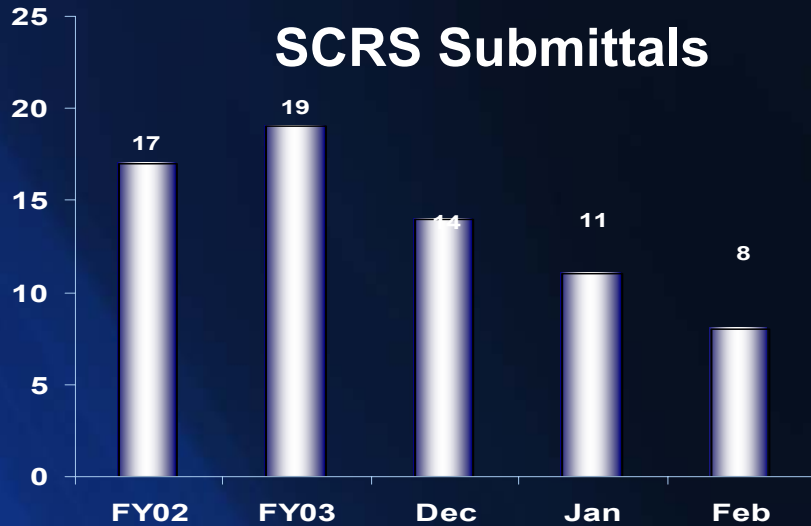
**Green** – OK  
**Yellow** - CAUTION  
**Red** - WARNING

\*Estimated

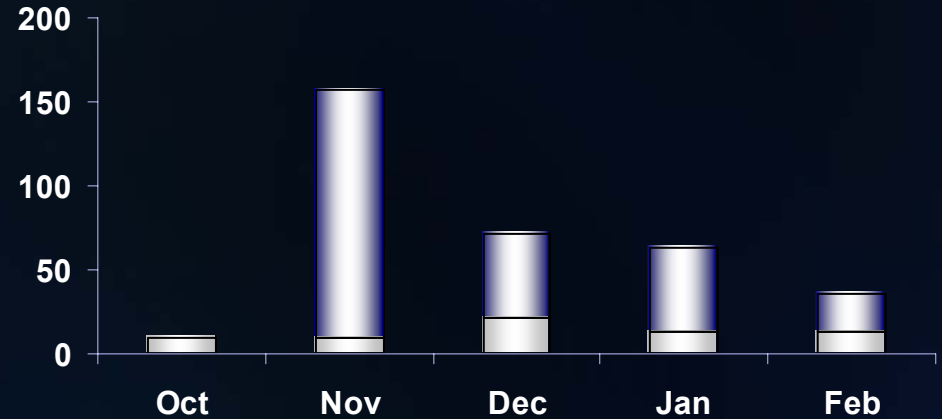


# Team Metrics - Leading Indicators (02-27-04)

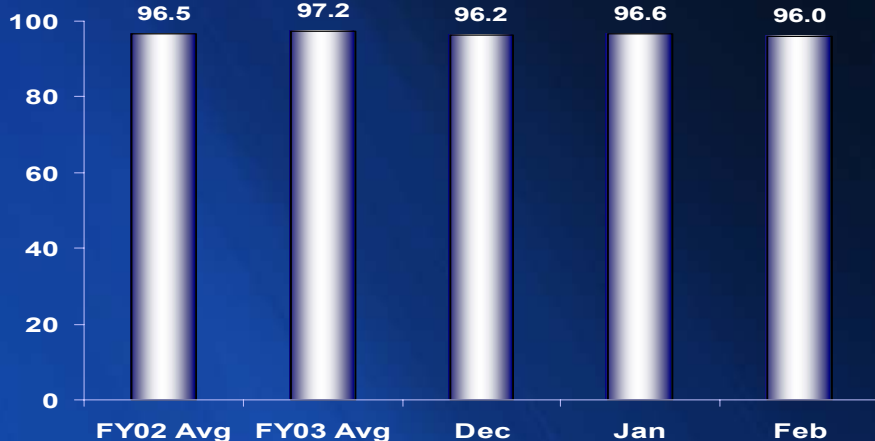
## SCRS Submittals



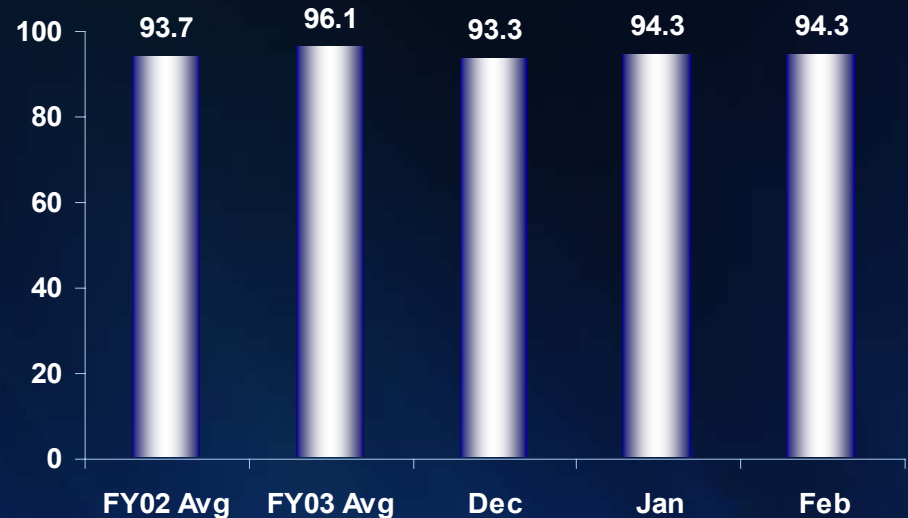
## Late Corrective Actions



## Supv. Safety Mtgs - % Complete



## Supv. Safety Visits - % Complete





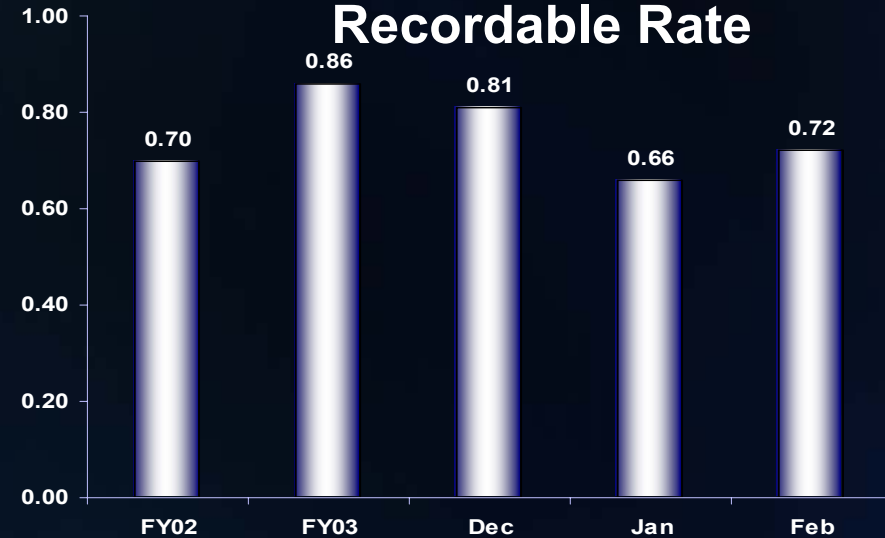
# Team Metrics - Trailing Indicators (02-27-04)

Lower is Better

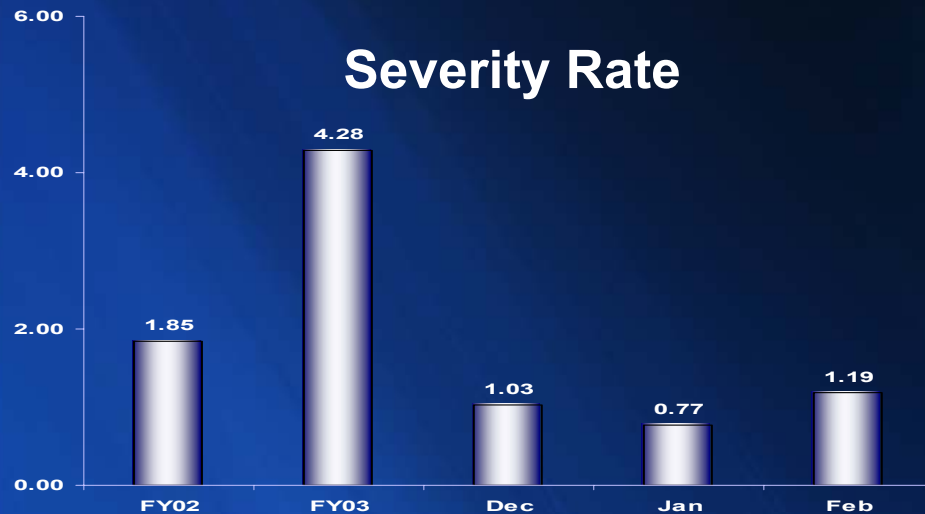
## Lost Time Rate



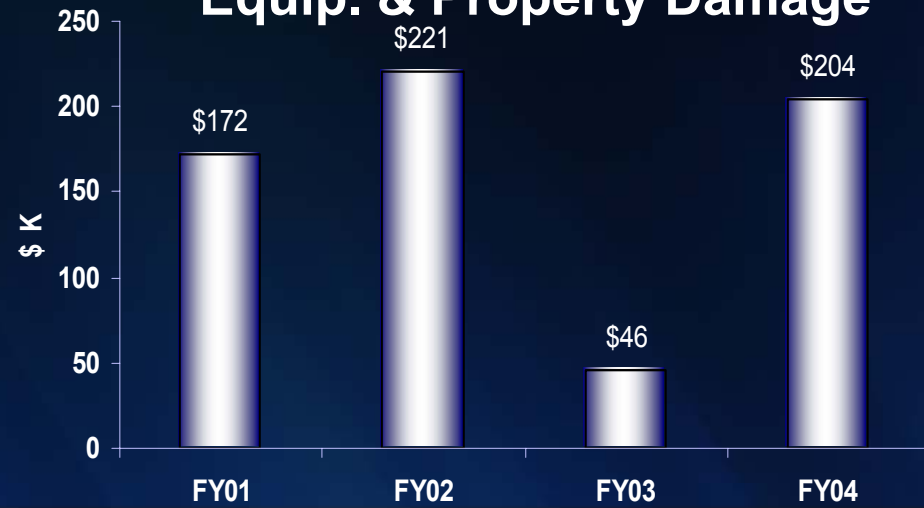
## Recordable Rate



## Severity Rate

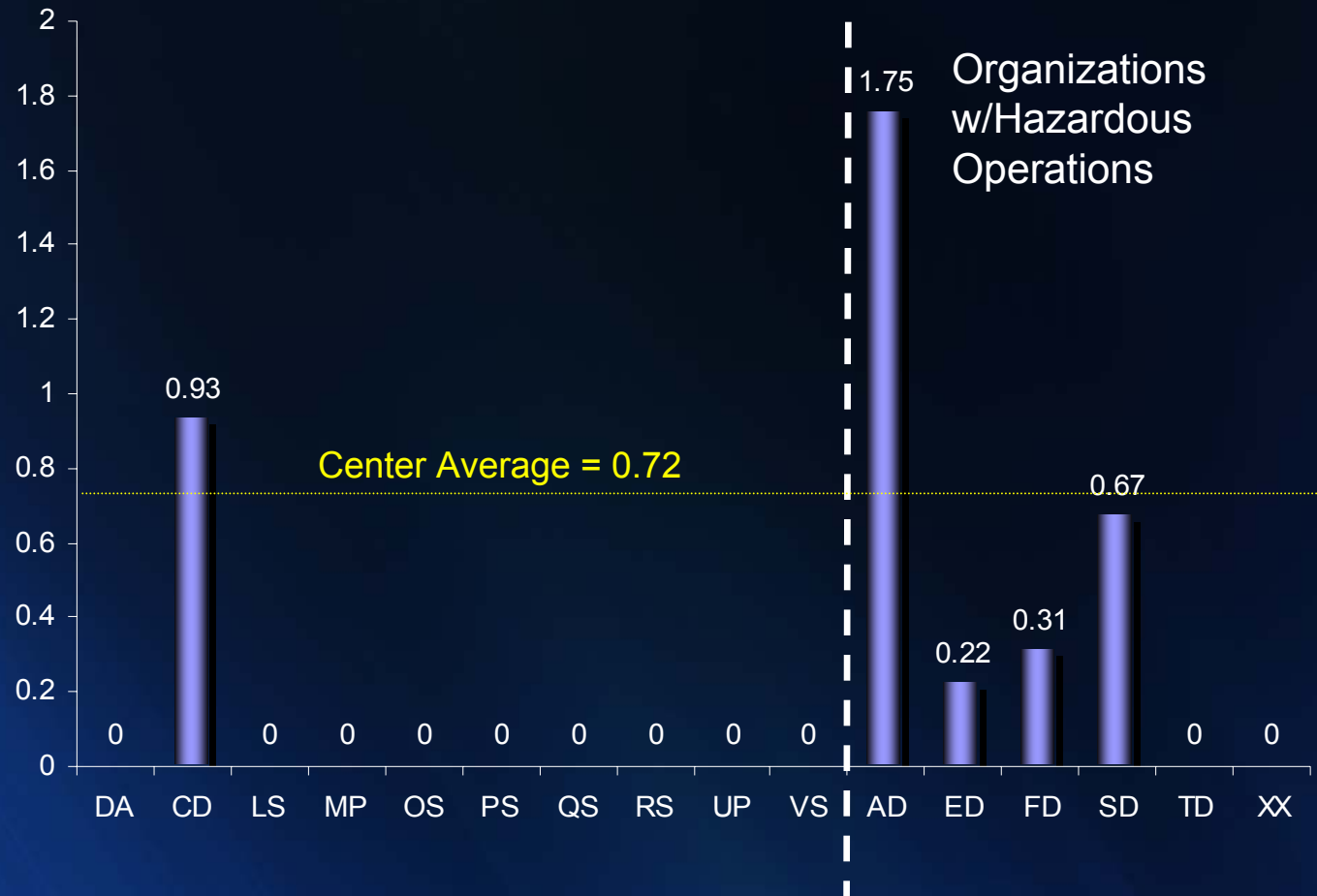


## Equip. & Property Damage



# FY04 OSHA Recordable Rates by Organization (Includes Contractors) (02-25-04)

ORG	Hours*	No.
DA	9,741	0
CD	215,817	1
LS	9,147	0
MP	187,733	0
OS	3,558	0
PS	99,407	0
QS	149,679	0
RS	89,883	0
UP	81,493	0
VS	25,420	0
AD	1,372,936	12
ED	901,207	1
FD	641,672	1
SD	298,437	1
TD	325,808	0
XX	70,917	0



\*Hours for Current Month Estimated

# Workers' Compensation Trends (03-01-04)

## MSFC Workers' Comp

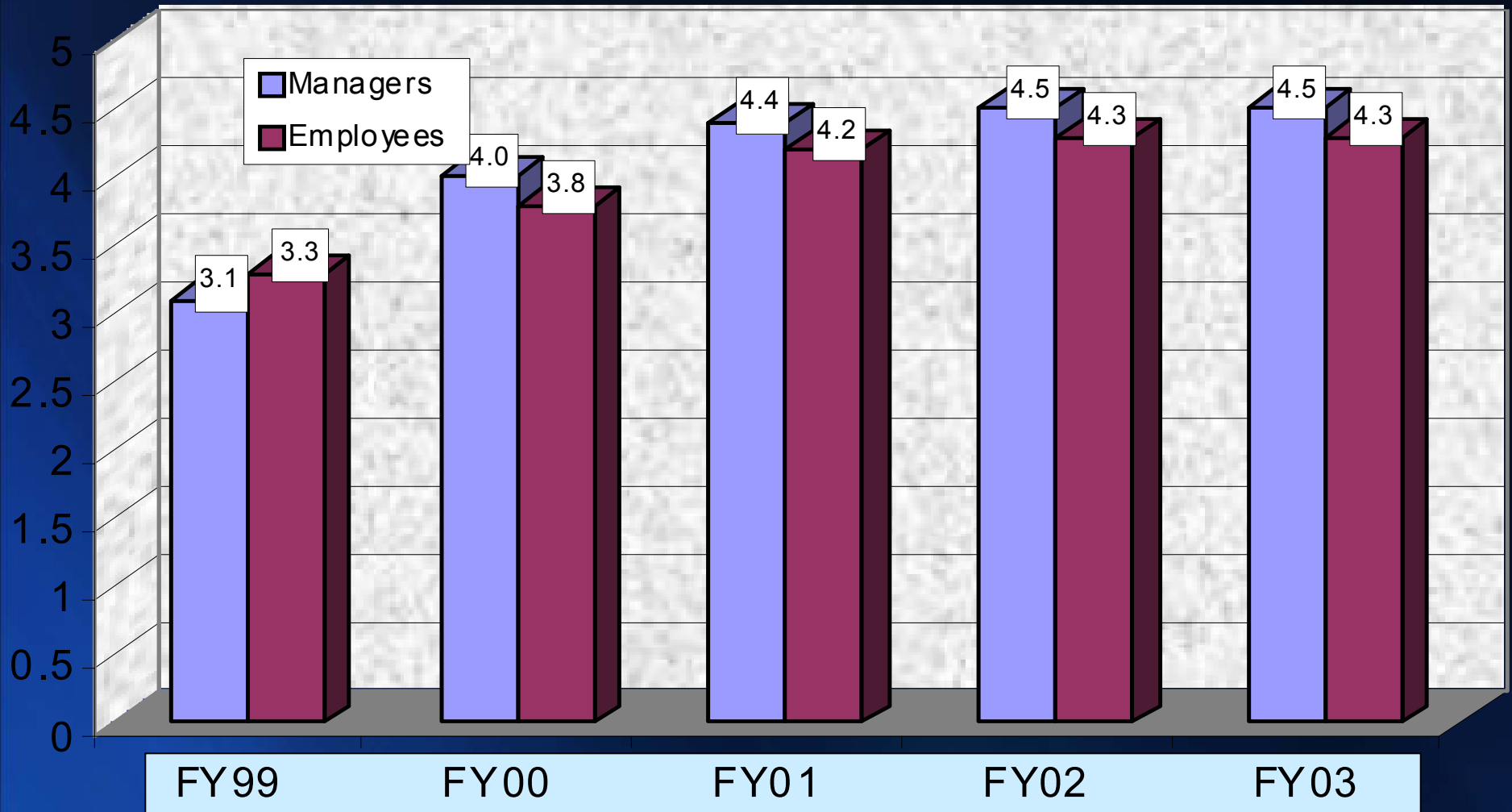


\* Thru 2<sup>nd</sup> quarter

■ No. Cases —●— \$ K

Workers Comp Data is for MSFC Civil Service only. (Contractors keep their own data.)

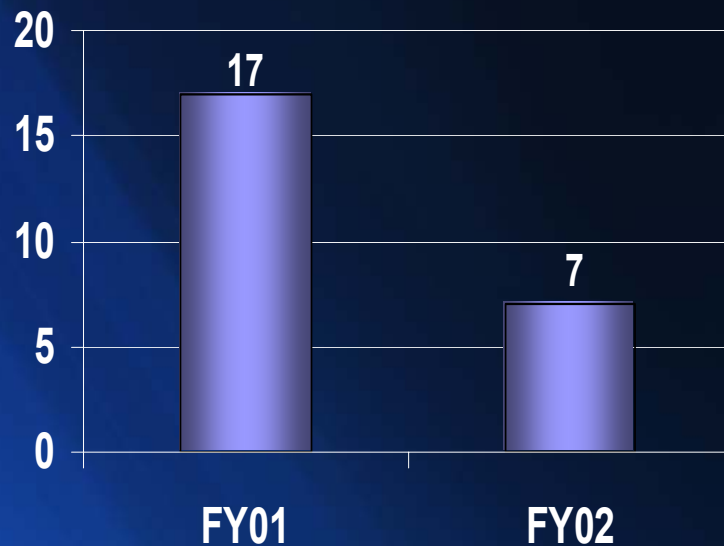
# MSFC PEP Scores – Historical Trend



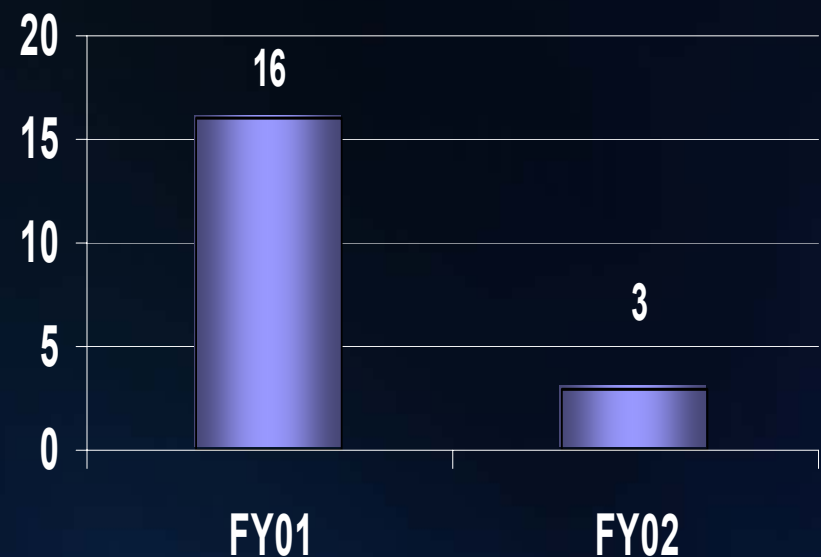
FY03 Participation: 93% for Employees and 96% for Managers

# MSFC Systemic Issues Comparison

## SHE Program Checklist Issues



## Office & Non-Hazardous Area Checklist Issues



**82% participation in FY02, increased to 94% in FY03**



## ***Supervisor Safety Web Page (SSWP) Demo:***

In FY01, monthly supervisory safety meeting and visit completion rates averaged 50-60%

After introducing SSWP, completion rates consistently in the mid-90% range

# BACKUP DATA

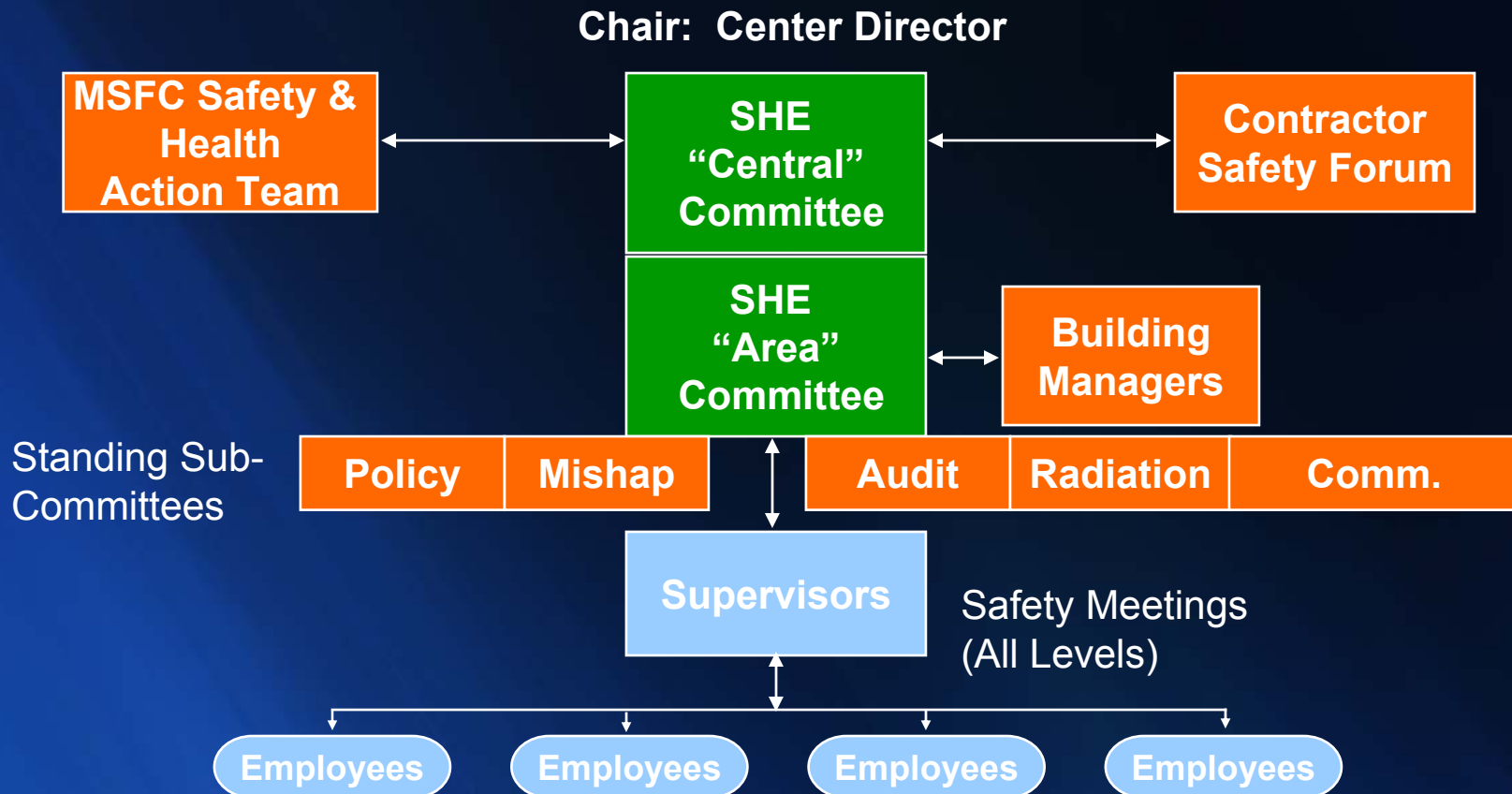
# MSFC Team Metric Key

Metric	Green	Yellow	Red
Fatalities/Disabling Injuries (Type A & B Mishaps)	0	N/A	> 0
Lost-Time Rate	0 - 0.20	N/A	> 0.20
OSHA Recordable Rate	< 0.8	0.8 - 1.0	> 1.0
All Case Rate ( Incl. First Aids)	< 2.0	2.01 - 3.00	> 3.00
Safety Office Findings Ratio*	> 4.0	3.0 – 4.0	< 3.0
% of Req'd Safety Meetings	> 90%	80 - 90%	< 80%
% of Req'd Safety Visits	> 90%	80 - 90%	< 80%
SCRS Ratio	> 1.5	1.0 – 1.5	< 1.0
Supervisor Findings Ratio*	> 15.0	10.0 – 15.0	< 10.0

\* Ratio of number of findings or concerns to the number of all cases.

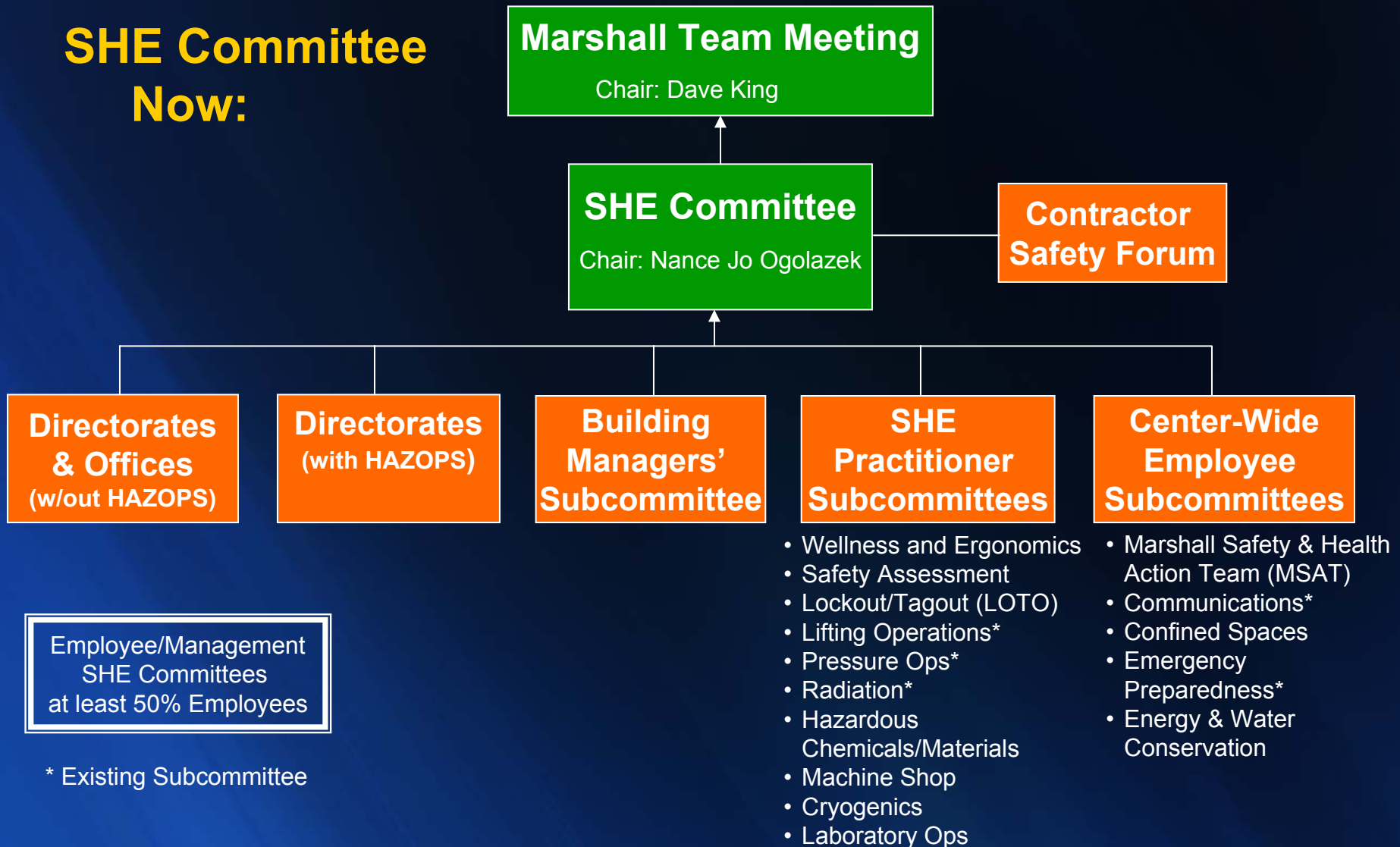
# MSFC Safety Successes

- Safety, Health, and Environmental (SHE) Committee Restructured From:**



# MSFC Safety Successes

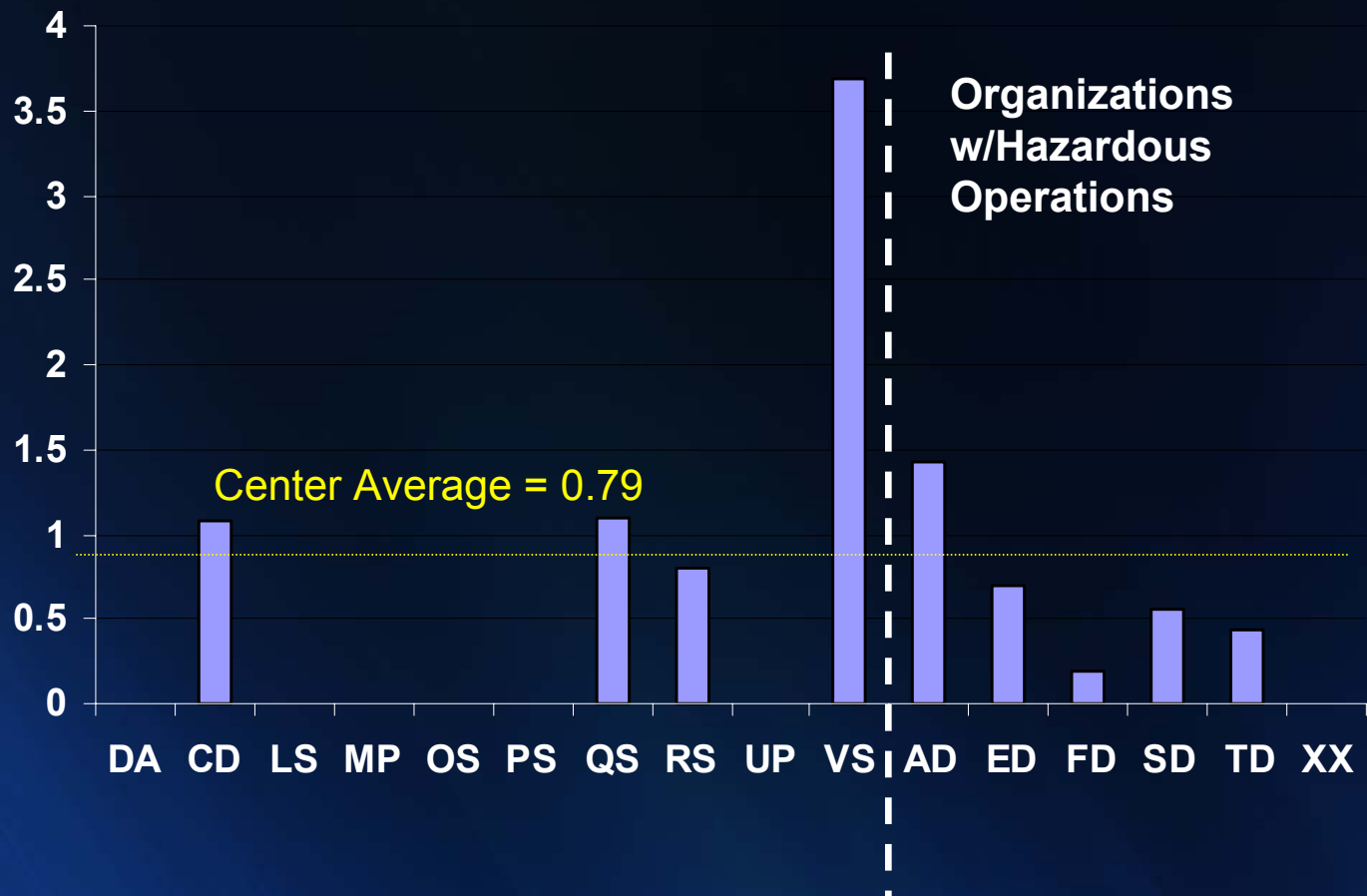
## SHE Committee Now:





# FY03 OSHA Recordable Rates by Organization (Includes Contractors) (10-01-03)

ORG	Hours*
DA	24,458
CD	558,729
LS	22,707
MP	454,266
OS	9,268
PS	254,601
QS	362,422
RS	251,116
UP	260,653
VS	54,183
AD	3,667,956
ED	2,283,783
FD	2,157,278
SD	727,692
TD	907,043
XX	104,969



\*Hours for Current Month Estimated

# FY02 OSHA Recordable Rates by Organization (Includes Contractors)

Org.	Hours
DA	25,401
QS	358,283
PS	235,970
LS	25,462
MP	235,750
RS	245,642
OS	10,887
VS	43,018
UP	69,009
CD	498,068
TD	1,179,498
SD	660,624
FD	1,330,776
ED	2,485,514
AD	3,808,131

